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ABSTRACT

A transition program at the American College of Life Underwriters which is moving into criterion-referenced measurement, but is also maintaining some of the desirable aspects of norm-referenced measurement, is discussed. Two programs that have moved into the criterion-referenced measurement area are the Cassette/Review Program of the Zimmerman Adult Learning Laboratory and the Mathematics of Life Insurance portion of one of the C.L.U. courses. (Author/DB)

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IMPLEMENTING A MIXED PROGRAM OF CRITERION AND NONCRITERION-REFERENCED MEASUREMENT*

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In recent years there has been an upsurge of interest in criterion-referenced measurement. This movement, while basically healthy, is at the same time dangerous. Garvin pointed out, there are cases where criterion-referenced measurement is irrelevant because there are in fact no meaningful criteria (Garvin, 1971). If there are meaningful criteria against which to judge performance, however, norm-referenced measurement is inappropriate. Garvin maintains that the question is not whether we should use criterion-referenced measurement or norm-referenced measurement, but rather when each should be used. In a paper presented to this AERA forum in 1963 and later published in the American Psychologist, Glaser detailed the essential difference between criterion and norm-referenced measurement and recommended situations in which each might be used (Glaser, 1963).

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Making a rational decision to use criterion-referenced measurement is in theory easy. In practice, it may be very difficult. As Cox has pointed out, (Cox, 1971) most examples of criterion-referenced testing have been associated with individualized instructional programs. Moreover, most instances of criterion-referenced measurement are associated with new rather than ongoing programs. But what should be done about established programs? Since there are ongoing situations in which criterion-referenced measurement might be more appropriate than norm-referenced measurement, it would seem desirable to examine these situations, decide whether or not this is the appropriate method of measurement and if criterion-referenced measurement would be more appropriate, move toward this goal. The concept of transition from a norm-referenced measurement program to one which may be a mixed norm-referenced and criterion-referenced measurement is generally not discussed in great detail. It is, however, unrealistic to assume that a program which is norm-referenced can be, with a wave of a wand, transformed into a criterion-referenced program. Oftentimes, although it may be felt there are criteria which could be used, the problems associated with validating those criteria and developing the appropriate measures to assess student performance are horrendous.

What I would like to describe for you today is a transition program at the American College of Life Underwriters which is moving into criterion-referenced measurement, while not abandoning some of the desirable aspects of norm-referenced measurement.

Since 1927, the American College of Life Underwriters has been administering a program of examinations leading to the Chartered Life Underwiter Diploma (C.L.U.), (Stone, 1963). The program has been built upon

identified needs, but has not made explicit the objectives upon which the evaluation is based. Therefore, although the measurement suggested a criterion-referenced approach, it could not truly be called criterion-referenced.

Recently, the College established the Zimmerman Adult Learning Laboratory for the purpose of improving the quality of adult education through basic research and through improved instructional programs (Lucas, 1971, Rahmlow, 1971). In order to accomplish this mission and to document improved learning results, it is necessary to begin with criteria against which to judge performance. This need is leading the College toward criterion-referenced measurement. This paper will describe two programs that have moved into the criterion-referenced area. It will also describe the larger picture of criterion documentation.

CASSETTE/REVIEW PROGRAM

A recent important project of the Zimmerman Adult Learning Laboratory has been to develop an audio Cassette/Review Program which provides a review for the 10 course C.L.U. Diploma Program. Beginning with the general objectives for the C.L.U. Diploma Program courses, specific criteria against which candidate performance could be measured were developed. The initial task of this project was to ask Subject Matter Experts to generate questions which could be used to measure a candidate's comprehension of the subject matter. After these questions were determined, other members of the learning systems team worked with the Subject Matter Experts to specify objectives encompassing a number of specific questions.

Through this interactive process a set of objectives, along with test items referenced to these objectives was developed. Within this framework, the review program was developed (Langdon, in press).

The evaluation of the effectiveness of the audio Cassette/Review Program was judged in the normal pre-test, post-test manner initially using a relatively small sample. The data was then used for improving the review program.

However, the criteria against which the review program should ultimately be judged is the candidates' performance on the national C.L.U. Diploma examination. A study of this kind is underway. These national examinations, however, are based on general rather than specific objectives and cannot be judged to be criterion-referenced tests. So in this first example we see an instructional program having as its criteria for success a noncriterion-referenced test.

MATHEMATICS OF LIFE INSURANCE

Let us consider another instance where the development of instructional programs has generated the need for developing criterion-referenced measurement. Currently, the C.L.U. Diploma Program is supported by group oriented instructional materials, but data indicates that approximately 50% of the College's candidates do not participate in formal group instruction. Therefore, it is logical to develop additional materials aimed at individual candidates rather than at groups. As a pilot project, individualized materials are being developed for the mathematics of life insurance portion of one of the C.L.U. courses. The first step in the development of these materials was a derivation of objectives for the course. At the same time

objectives were being developed, test items reflecting those objectives were being generated. The objectives and items then provide a basis for evaluating the effectiveness of the instructional materials. Again, the reason for developing the instructional materials is to help candidates pass the C.L.U. Diploma examinations. This once more poses a problem of criterion transfer.

ACHIEVEMENT TESTING

So far we have discussed two criterion-referenced instructional programs designed to assist candidates in developing competency to pass a noncriterion-referenced test. Since this noncriterion-referenced test is developed independently, it can be argued that the achievement test is itself the criterion against which candidate performance is being judged. This line of reasoning can be further supported when it is considered that the awarding of the C.L.U. Diploma is, in part, based upon the successful completion of the 10 examination series.

Consequently, it can be argued that the C.L.U. examination is the criteria which the total instructional program should be judged. But is an examination an appropriate ultimate criteria? The College has felt the answer is no. Throughout its history, the American College has sought to establish a relationship between job performance and the C.L.U. deignation. While the work necessary to establish a definite causal relationship has not been undertaken, periodic surveys indicate the strong possibility of such a relationship (Lucas, 1970).

The reason for the existence of the C.L.U. Diploma Program is to educate persons in the insurance field so that they may serve the public more effectively. The real criterion, against which the examination and therefore the total instructional program should be judged, is service to the public. This concept obviously poses some very stickey problems of criteria definition, but we are making some progress.

SUMMARY

The purpose of this paper was to summarize some of the activity taking place at the American College of Life Underwriters in an effort to introduce the concept of criterion-referenced measurement to a program that has not been criterion-referenced. As we have seen, this introduction of criterion-referenced measurement has moved the College's measurement activities from a noncriterion-referenced mode to a mixed mode. One of the strong forces which influenced this move toward criterion-referenced measurement was a need to document progress in improving instructional materials. In addition, there has been a search for a basis for a realistic criteria against which the total program could be evaluated.

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